



GPR160

RFID & Fingerprint Access Control



User Manual

INTRODUCTION

The GPR160 is a single entry standalone access control with integrated fingerprint reader and card reader. It is housed in a strong Zinc Alloy electroplated case, vandal resistant.

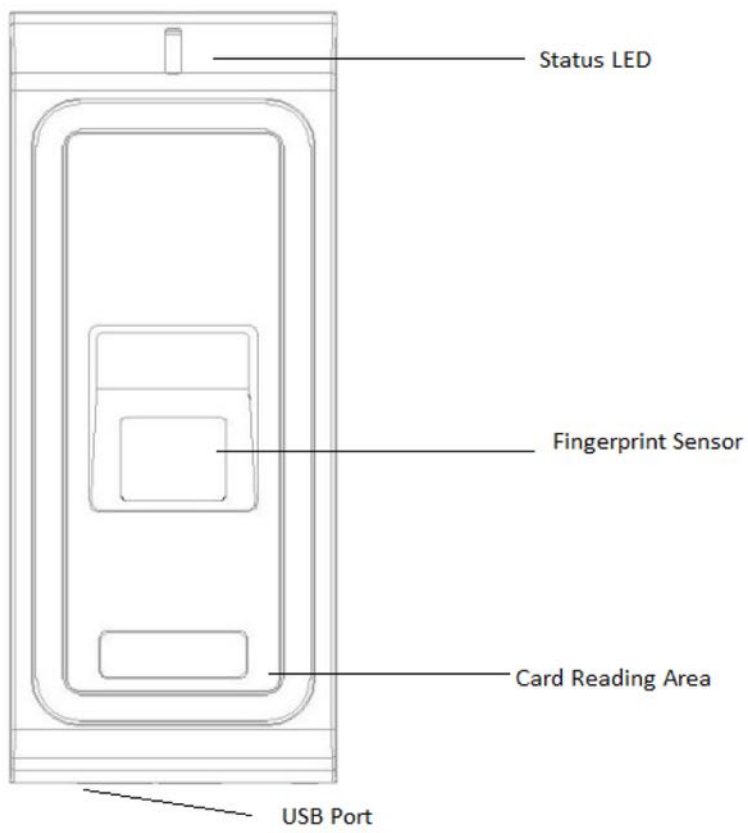
It supports up to 500 fingerprint users and 500 card users. The Wiegand interface makes it be able to work as reader to a 3rd party controller. Also it supports downloading and uploading user's information by USB, so users needn't enrolled again if you need to install more devices.

Main Features:

- Vandal resistant enclosure
- One programming relay output
- Standalone or Pass-through operation
- 500 Fingerprint users, 500 RFID card users
- Wiegand 26 bits output
- Latch Mode to hold door or gate open
- Supports USB flash drive copy users' information
- Anti-tamper alarm
- Multi-color LED status display
- Integrated alarm & buzzer output

Specifications:

User Capacity Fingerprint / Card	1000 500 / 500
Operating Voltage Idle Current Active Current	12VDC±10% < 20Ma ≤40Ma
Proximity Card Reader Radio Technology Read Range	Industry Standard 26 bit 125KHz Industry Proximity EM Card 1- 3cm
Fingerprint Reader Resolution Identification time FAR/FRR	Optical Fingerprint Module 500DPI <1S <0.0001% / <0.01%
Wiring Connections	Relay Out, Exit Button, Alarm, Wiegand output
Relay Adjustable Relay Output Time Lock Output Load Alarm Output Load	One (NO, NC, Common) 1~99 Seconds (5 seconds default) 2 Amp Maximum 5 Amp Maximum
Wiegand Interface	Wiegand 26 bit Format Output
Environment Operating Temperature Operating Humidity	Indoor -15°C~50°C 20%RH-90%RH
Physical Surface Finish Dimensions Unit Weight Shipping Weight	Zinc-Ally Enclosure Power Coat L132mm × W54mm × D22mm 380g 510g



Carton Inventory



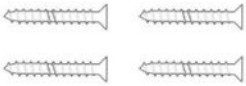
GPR160 Fingerprint Reader



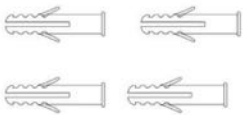
Infrared Remote Control



Diode IN4007 (For relay circuit protection)



Self Tapping Screws (4X25mm)



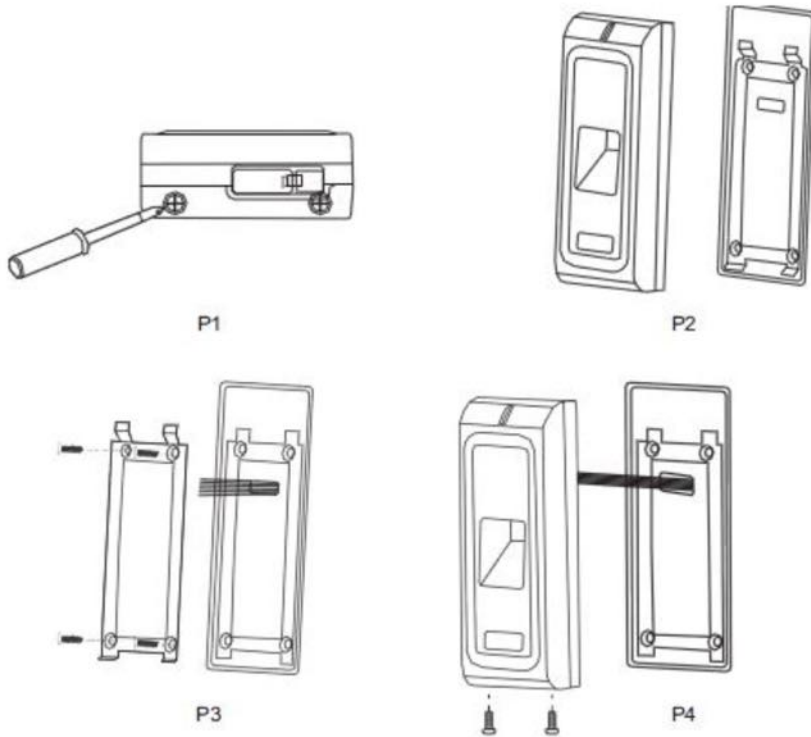
Wall Anchors (4X25mm)



Security Screwdriver

INSTALLATION

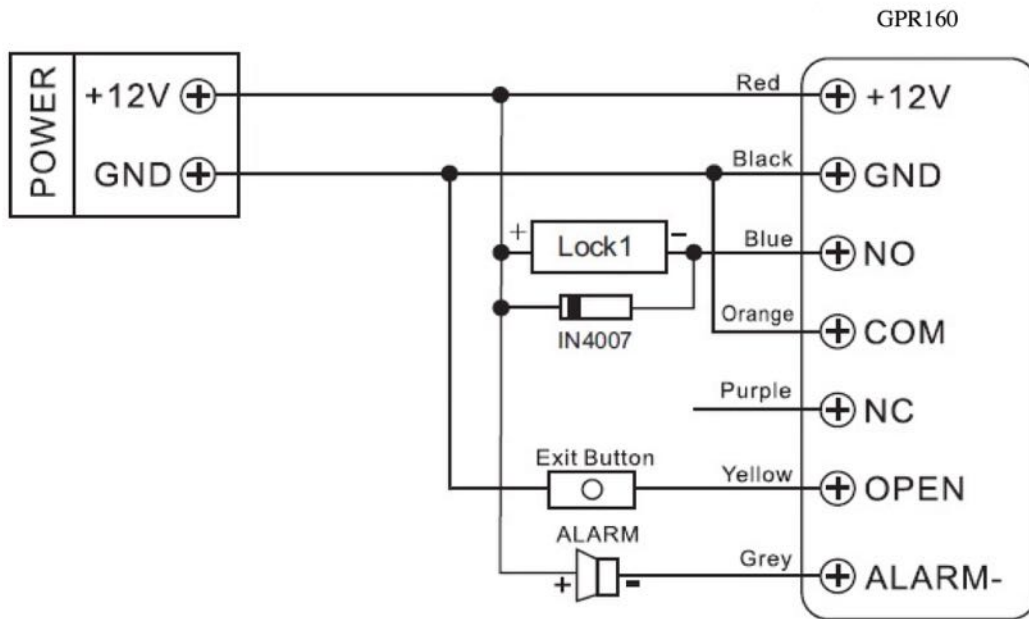
Installation



Wiring

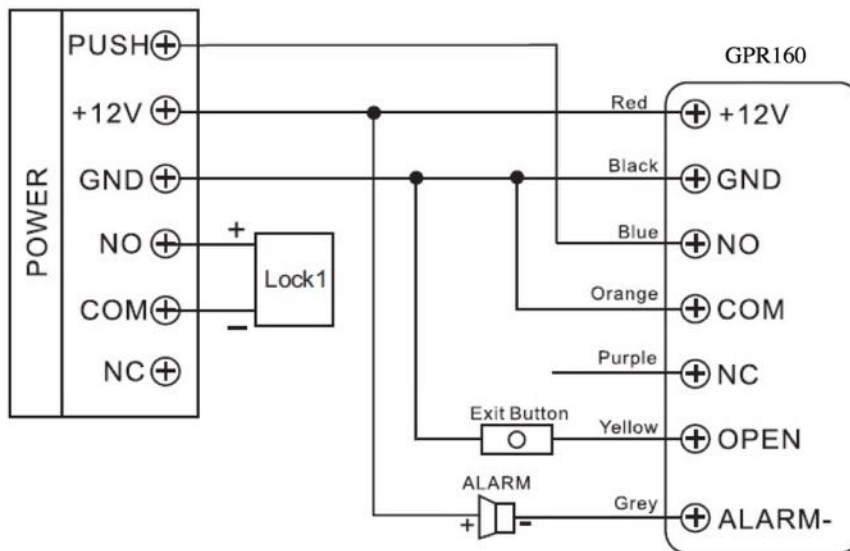
Wire Color	Function	Notes
Basic Stand Alone Wiring		
Red	12V DC	12 DC Regulated Power Input
Black	GND	Ground
Blue	Relay NO	Normally Open Relay Output (install diode provided)
Orange	Relay Common	Common Connection for Relay Output
Purple	Relay NC	Normally Closed Relay Output (Install diode provided)
Yellow	OPEN	Request to Exit(REX) Input
Grey	Alarm Output	Negative contact for Alarm
Pass-Through Wiring (Wiegand Reader)		
Green	Data 0	Wiegand Output (Pass-through) Data 0
White	Data 1	Wiegand Output (Pass-through) Data 1
GND	GND	Connect to Controller to stabilize the Wiegand transmission (Optional)

Connection Diagram



Attention: Install a 1N4007 or equivalent diode is needed when use a common power supply, or the reader might be damaged. (1N4007 is included in the packing)

Access Control Power Supply:



Pass-through: Please check “Others” – No.4 Pass-through Operation

PROGRAMMING

Programming 1 -----Programming Fingerprint, Card

GENERAL PROGRAMMING INFORMATION

• **Master Fingerprint / Card:** Up to 5 Masters for the GPR160, they need to be added firstly, and it will be the only way to enter into programming mode.

Input Master Fingerprint/Card once is for adding users; Input Master Fingerprint/Card twice within 5 seconds is for deleting users.

• **User ID Number:** Assign a user ID number to the access code in order to keep track of the users. The user ID number can be any number from 1~9999.

IMPORTANT: User IDs do not have to be proceeded with any leading zeros. Recording of User ID is critical.

Modifications to the user require the User ID or card be available.

• **Proximity Card:** Any 125KHz industry standard 26 bit EM Proximity card/ tag.

ADD MASTER FINGERPRINT(S) / CARD(S)

Programming Step	Keystroke Combination
1. Enter Program Mode	*(123456)
2. Add Master Fingerprint: OR 2. Add Master Card:	* 1 (Fingerprint) (Repeat Fingerprint) <i>The Master Fingerprints can be added continuously.</i> * 1 (Card) <i>The Master Cards can be added continuously.</i> <i>(Up to 5 Masters)</i>
3. Exit	#
Note: After Master Fingerprint/Card registered, the default master PIN 123456 will become invalid.	

ADD USER FINGERPRINT(S)

Programming Step	Keystroke Combination
1. Enter Program Mode	Input (Master Fingerprint / Card)
2. Add Fingerprint: Using Auto ID <i>(Allows it to assign Fingerprint to next available User ID number)</i> OR 2. Add Fingerprint: Select Specific ID <i>(Allows master to define a specific User ID to associate the fingerprint to)</i>	(Fingerprint) (Repeat Fingerprint) <i>Repeat Step 2 for additional user Fingerprints</i> (User ID) # (Fingerprint) (Repeat Fingerprint) <i>The user ID is any number from 1-9999.</i>
3. Exit	Input (Master Fingerprint / Card)

ADD USER CARD(S)

Programming Step	Keystroke Combination
1. Enter Program Mode	Input (Master Fingerprint / Card)
2. Add Card: Using Auto ID <i>(Allows it to assign Card to next available User ID number)</i> OR 2. Add Card: Select Specific ID <i>(Allows manager to define a specific User ID to associate the Card to)</i>	(Read Card) <i>Repeat Step 2 for additional user Cards</i> (User ID) # (Read Card) The user ID of Card is any number from 1-9999.
3. Exit	Input (Master Fingerprint / Card)

DELETE USER FINGERPRINT(S) OR CARD(S)

Method 1:

Programming Step	Keystroke Combination
1. Enter Program Mode	Input (Master Fingerprint / Card)
2. Delete User - By User ID OR 2. Delete User - By Fingerprint/Card OR 2. Delete ALL User	* 2 (User ID) # * 2 (Input Fingerprint / Card) * 2(0000) #
3. Exit	Input (Master Fingerprint / Card)

Method 2:

Programming Step	Keystroke Combination
1. Input (Master Fingerprint / Card) Twice within 5 Seconds	
2. Delete User - By User ID OR 2. Delete User - By Fingerprint/Card	(User ID) # Input (Fingerprint / Card)
3. Exit	Input (Master Fingerprint / Card)

PROGRAMMING 2 -----Configure GPR160

Change the configure settings according to your application.

SET RELAY CONFIGURATION

The relay configuration sets the behavior of the output relay on activation.

Programming Step	Keystroke Combination
1. Enter Program Mode	Input (Master Fingerprint / Card)
2. Pulse Mode OR 2. Toggle Mode	* 3 (1-99) # <i>The relay time is 1-99 seconds(1 is 50ms)</i> <i>Default is 5 seconds</i> * 3 0 # <i>Sets the relay to ON/OFF toggle mode</i>
3. Exit	After one beep, it will exit automatically

SET STRIKE-OUT ALARM

The strike-out alarm will engage after 10 failed card/fingerprint attempts. Factory default is OFF. The strike-out alarm can be set to deny access for 10 minutes after engaging or it can be set to disengage only after entering a valid card or fingerprint.

Programming Step	Keystroke Combination
1. Enter Program Mode	Input (Master Fingerprint / Card)
2. Strike-Out OFF OR 2. Strike-Out ON OR 2. Strike-Out ON	* 6 0 # <i>(factory default)</i> * 6 1 # <i>The device locked up</i> * 6 2 # <i>The buzzer alarms</i>
3. Exit	After one beep, it will exit automatically

SET LED

Programming Step	Keystroke Combination
1. Enter Program Mode	Input (Master Fingerprint / Card)
2. LED OFF OR 2. LED ON	* 7 0 # * 7 1 # <i>(Factory default)</i>
3. Exit	After one beep, it will exit automatically

RESET the GPR160:

Reset with new Masters

(It is very helpful when the manager lost Master Card, or people with Master Fingerprint/Card has left)

Power off, open the back cover of M7, then power on, the anti-alarm will be activated, after 30 seconds, please input "* 123456" then the LED will turn into Blue, the next step is very **IMPORTANT**, please add any new Mater Fingerprint / Card (so that the old ones will become invalid), and then press "#" to exist. After the setting, all users' information and settings are still retained.

Reset into default settings

Programming Step	Keystroke Combination
1. Enter Program Mode	Input (Master Fingerprint / Card)
2. Reset to Factory Default	* 9 0 (All fingerprint/card information will still be retained)
3. Exit	After one beep, it will exit automatically

DELETE ALL USERS and MASTERS

(Be careful with this step)

Programming Step	Keystroke Combination
1. Enter Program Mode	Input (Master Fingerprint / Card)
2. Reset to Factory Default	* 9 1
3. Exit	After long beep, it will exit automatically

DELETE MASTERS (Master Fingerprint / Card)

Programming Step	Keystroke Combination
1. Enter Program Mode	Input (Master Fingerprint / Card)
2. To Delete Master Fingerprint / Card	* 9 2
3. Exit	After one beep, it will exit automatically

Others

1. Users Operation:

Open the door: Input valid fingerprint or read valid user card

Remove Alarm: Input valid fingerprint, or read valid user card, or input Master Fingerprint / Card

2. Download/upload users' information by USB

The GPR160 can download all the users' information (Fingerprint, Card) by USB.

Download:

1. Connect GPR160 with the Flash Drive or some thing similar by the USB cable provided. The LED will flash quickly in red

2. Input (Master Fingerprint / Card)

The LED will turn in blue, and there will be a long beep, LED shines in red, means download the users' information successfully.

Upload:

1. Connect the Flash Drive with another GPR160 (MUST without users' information) by the USB cable.

2. Input (Master Fingerprint / Card)

The LED will turn in blue, and there will be a long beep, LED shines in red, means upload the users' information successfully.

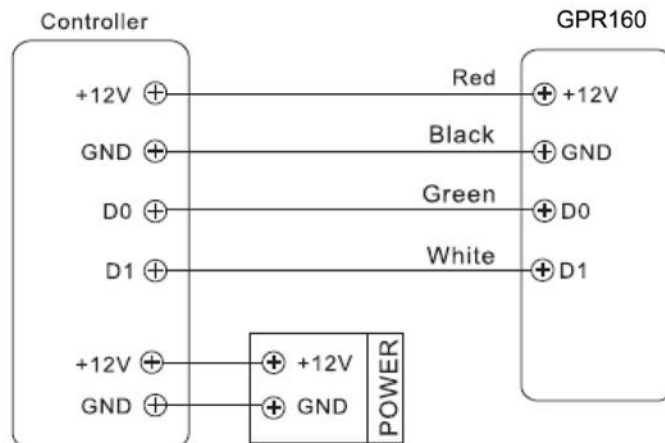
3. Sound and Light Indication

Operation Status	LED	Buzzer
Stand by	Red light shines	-
Enter into programming mode	Blue light bright	One long beep
Operation succeed	Blue light shine	One long beep
Operation error	Red light shine	Two beeps
Exit from the programming mode	Red light shine	One beep
Open lock	Blue light shine	One beep
Alarm	Red light Shines quickly	Beeps

4. Pass-Through Operation

The GPR160 can be operated as a Wiegand Output Reader to the Controller.

In this mode, GPR160 supports Wiegand 26 bits output, so the Wiegand data lines can be connected to any controller which supports a Wiegand 26 bits input. The connection diagram is as below:



GPR160 - Simplified Instruction

Function description	Operation
Enter the programming mode	Input (Master Fingerprint / Card) (Please firstly add the Master Fingerprint / card before all the following settings)
Add fingerprint user	Fingerprint - Repeat Fingerprint (can add Fingerprints continuously)
Add card user	Card (can add Cards continuously)
Delete user	* 2 - Fingerprint * 2 - Card (can delete Users continuously)
Exit from the programming mode	Input (Master Fingerprint / Card) again
How to release the door	
Fingerprint User	Put the Finger on the fingerprint sensor for 1 second
Card User	Read card



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